Problem A: Achilles Paradox

Side note: for more information about this contest, please visit this website.

> A dusty runway under the sun. Achilles —a Greek warrior, and the fleetest of foot of all mortals— and a Tortoise are casually conversing when Zeno, a Greek philosopher from the town of Elea, approaches them.

Zeno: Hello, boys! Did you know we are about to make history today?

Tortoise: Let me guess. I think we are about to test what is going to be called for years to come as "The Paradox of the Tortoise and Achilles".

Achilles: Hmm. Wait a minute, isn't that "The Paradox of Achilles and the Tortoise"?

Tortoise: I've heard it both ways.

Zeno: Regardless... I hope you two are in the mood for a little footrace. You see, I've come to an astounding realisation: there is no such thing as "space" —*motion* and *distances* do not exist, except as mere fabrications of our minds. I can see you're a little skeptical, Achilles, but hear me out. Let's say that you two had a footrace. Now, since Mr. T is not as fast as you, Achilles, surely you could grant him a head start of a few yards.

Achilles: Sure, I guess. But isn't this just a little silly? After all, I'm the fleetest of foot of all mortals, and Mr. T is the ploddingest of all plodders!

Zeno: It's very simple. Once the race begins, you will, in a few leaps and bounds, reach the exact spot where Mr. T started the race. But during this time, Mr. T will have moved a few steps. You quickly reach that position as well, but by then our friend will have moved a little more. This process will be repeated over and over, an *infinite* number of times, which is why you could never catch up to Mr. T, much less overtake him. Do you see the illusory nature of motion now?

Achilles: Hmm. There's something strange in there. I can't say exactly what it is, but I'm sure something's not right. What do you say, Mr. T? Let's have that race, and I will show you.

Tortoise: As you wish. Let me get in position.

Zeno: How wonderful! Finally, experimental proof of my paradox! Okay, are you ready? On your mark! Get set! Go!

Let v_a and v_t be the speeds of Achilles and Mr. T, respectively. We will assume that the ratio r between the speeds is a positive integer $r = v_a \div v_t$, with $r > 1$. Let L be the distance granted to Mr. T as a head start. If you know the values of r and L, can you determine if Achilles has already caught up to Mr. T after Achilles has covered a certain distance D?

Input

Input starts with a positive integer **T**, that denotes the number of test cases. Each test case is described by three integers **r**, **L** and **D** given in a single line, in that order.

$T \leq 5000$; $2 \leq r \leq 10^3$; $1 \leq L, D \leq 10^5$

Output

For each test case, print the case number, and then print **yes** if Achilles has already caught up to Mr. T by the time Achilles has covered a distance D; otherwise print **no**.

Sample Input	Output for Sample Input
4 3 10 12 3 10 15 20 150 157 20 150 158	Case 1: no Case 2: yes Case 3: no Case 4: yes